

THE MAINTENANCE BEACON

The Monthly Newsletter of the North Carolina Public School Maintenance Association

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MEETING DATES

The districts of NCPSMA meet twice yearly.

District 1

January, July

District 2

January, July

Pres. Ronald Moore
Phone: 910.296.1875

District 3

February, August

Pres. Greg Woodard
Phone: 252.399.7822

District 4

February, October

Pres. Donna Fields
Phone: 910.678.2565

District 5

March, September

Pres. Justin Dyson
Phone: 336.909.2280

District 6

April, October

Pres. Chris Adkins
Phone: 980.343.4526

District 7

May, November

Pres. Jeff Adams
Phone: 336.551.1109

District 8

March, November

Pres. Clark Wyatt
Phone: 828.232.4244

Meeting Dates & Locations

Should be sent to The Maintenance Beacon two months in advance for publication.

Deadlines

Publication deadline for articles and advertisements is first day of the month prior to month of publication.

NCPSMA District Three Meeting Hosted by Halifax County Schools



Lashon Lucas and Sue Farmer



Halifax County Schools hosted the NCPSMA District Three Meeting on February 15, 2024, at the Enfield Middle S.T.E.A.M. Academy in Enfield, North Carolina. Recently retired District Three Secretary/Treasurer Sue Farmer and newly employed Lashon Lucas greeting each attendee as they arrived and distributed door prize tickets and tried to entice you to purchase 50/50 tickets.

District Three President Greg Woodard called the meeting to order and introduced Enfield Middle S.T.E.A.M. Academy Principal Linda Cooper. Ms. Cooper welcomed everyone to this event and to Halifax County. She holds a Bachelor of Science degree in Elementary Education from Barton College, A Master of Arts degree in Reading Education from East Carolina University, and an Administration Licensure from Gardner Webb University. Along her educational journey to principal, she has worn many hats and she knows and understands the importance of each role. She thanked all the maintenance employees for everything they do within the school systems.

continued on page 4

NCPSMA District Four Meeting Hosted by Cumberland County Schools



NCPSMA District Four met on February 29, 2024 at Cumberland County Schools Operations Center as we celebrated Leap Year with the theme "One Extra Day". It was wonderful to see the number of people that came out to make the attendance at this meeting more than doubled from the last meeting. District Four President and Executive Director of Operations for Cumberland County Schools, Donna Fields welcomed everyone to the event and led everyone in the Pledge of Allegiance. Vincent Key of Cumberland County Schools gave the invocation. Sheryl's Catering prepared a delicious meal where there

was an abundance of choices to choose from including fried chicken, pork loin and roast beef, mashed potatoes, green beans, corn and a roll which was followed by your choice of banana pudding, red velvet cake and chocolate cake!! So

continued on page 3

Meetings and Events

DISTRICT SEVEN MEETING

April 30, 2024

Catawba County Schools, Bunker Hill High School
4675 Oxford School Road, Claremont, NC 28610

For more information contact D7 Secretary Robert Hoyle at 828.464.3562

16TH ANNUAL WESTERN CONVENTION

May 21-23, 2024

Ridgecrest Conference Center
1 Ridgecrest Drive, Black Mountain, NC 28711

DISTRICT TWO GOLF OUTING

July 16, 2024 at 12 pm

Hosted by Brunswick County Schools at
Carolina National Golf Club

For more information contact Alysa Watkins at 919.612.2432f

DISTRICT TWO MEETING

July 16, 2024 at 6pm

Hosted by Brunswick County Schools at
COAST Center of Applied Sciences and Technology
1109 Old Ocean Hwy, Bolivia, NC 28422

For more information contact Alysa Watkins at 919.612.2432f

52ND ANNUAL EASTERN CONVENTION

September 24-27, 2024

Double Tree by Hilton
2717 W. Fort Macon Rd, Atlantic Beach, NC 28513

DISTRICT THREE GOLF TOURNAMENT

October 25, 2024 • Lunch at 12pm • Shotgun Start at 1pm

Wedgewood Public Golf Course
3201 Stantonsburg Rd., Wilson, NC

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PROUDLY SUPPORTING NCPSMA MEMBERS

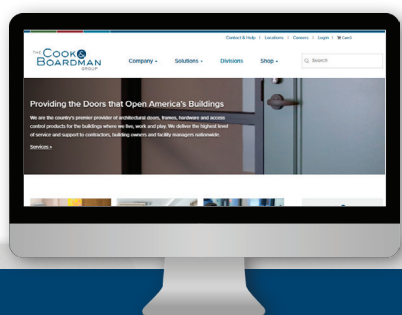
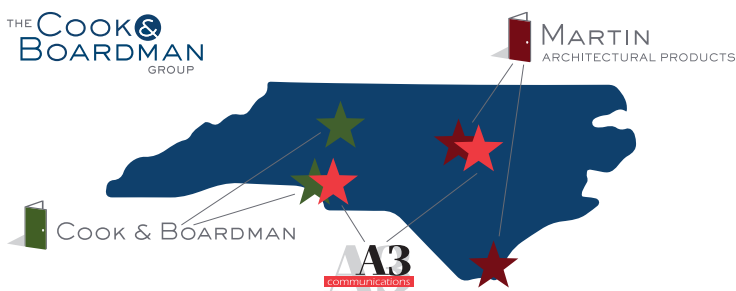
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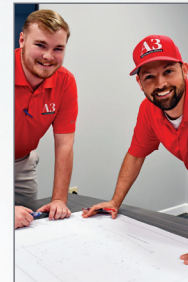
- Assessments
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Contact: Kevin Wren | (803) 984-7007



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Randy Beeson | (980) 417-0248

Winston-Salem Office: Mark Van Hoever | (336) 865-3734
Scottie Hentschel | (828) 446-9746



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Construction Divisions: 8 & 10

With offices in Cary and Wilmington, Martin Architectural Products is the leading provider of architectural doors, frames and hardware in eastern North Carolina. Counter sales, installation and service available!

Cary Office: Ira Garner | (919) 868-6593
Wilmington Office: Kyle Praeuner | (402) 841-1345

NCPSMA District Four Meeting Hosted by Cumberland County Schools

continued from page 1



many yummy, yummy choices!!! A huge shout out goes to Schneider Electric, SERVPRO of Fayetteville, Locklear, Locklear & Jacobs, RSG Building Solutions and Wolf Trail Engineering for funding this wonderful meal.



President Fields introduced the first guest speaker for the event, Dr. Marvin Connelly, Jr., Superintendent of Cumberland County Schools. Dr. Connelly praised the maintenance departments and said whether you see the well-groomed field or the shiny ballcourt first that is what sets the standard of what to expect from the rest of the school system. He went on to say when he was a principal he always made sure to have a member of his custodial staff a part of the interview team when hiring all new employees because if they did not get a "good vibe" from the candidate then he would not hire them. The support staff are some of the most important people in your district. Mr. Connelly thanked the maintenance department for all of their hard work stating that "Not only do you maintain the building but you maintain the lives of all of our children as well" and he appreciated all of the hard work that they do.



We were treated to a second guest speaker at this event as President Fields introduced Kevin Coleman, Associate Superintendent of Auxiliary Services for Cumberland County Schools. Mr. Coleman talked about how our school maintenance department is often overlooked and they never have enough money to maintain all of our buildings properly. He stressed how the physical environment plays a pivotal part in the children's learning and how successful they will be. Most people just look at test scores but what happens if the building is falling apart and the foundation is bad because that affects test scores as well. He thanked the maintenance department for being the foundation for the children's learning by keeping the buildings in a safe and inviting environment. Some of the highest skilled people you will find are maintenance workers and if you don't know how to do certain aspects of your job then you just need to listen to the workers that know how to do their jobs, you will learn from them. He feels that District Four is like a family and you look after your family.



President Fields then called the business meeting to order and did roll call. She thanked Alysa Watkins with Schneider Electric for organizing the catering for tonight's event and all of the sponsors. She couldn't help but also brag on phenomenal staff and all of the hard work they put into getting this meeting room ready for this meeting in just three weeks. She stated that she can always count on them to get the job done whatever project she sends their way. District Secretary Winifred Haire presented the minutes of the previous meeting and Treasurer Jennifer Locklear gave the financial report. President Fields stated that the District Four Scholarship Chairman no longer works for Cumberland County Schools but she has an application for \$500 for one semester. She encouraged qualifying members to submit applications and stated it is not just for children of members; it is also for members and/or spouses who would like to further their education. She is hoping to hold a raffle this summer to obtain more funds so they could possibly pay for two scholarships next year. On another note, she wants to start having more workshop opportunities available for District Four and wants to start using this newly renovated room to host them.



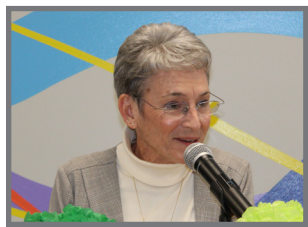
Greg Jessup



Guy Williams and
Shane Efird



Sheryl's Catering



Donna Fields

Next on the agenda was the election of officers. The following were presented to the members and elected: President Steve Matthews (Harnett Co.); Vice President Phillip Perry (Cumberland Co.); Secretary/Treasurer Donnie Tart (Harnett Co.); News Coordinator Jodene Abney (Cumberland Co.); 2-Year Advisory Council Member Jason Bullard (Robeson Co.); and 1-Year Advisory Council Member John Gordon (Cumberland Co.).

President Fields asked for volunteers to serve on the Scholarship Committee. The following volunteered: Donna Fields (Cumberland Co.), Chip Perry (Cumberland Co.), and Billy Wester (Harnett Co.).

The 50/50 raffle brought in \$457 dollars and lucky winner of half of that was Brandon

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Convention Planning and Advisory Council Meeting



The North Carolina Public School Maintenance Association Convention Planning Committee and Advisory Council met on March 7, 2024 at Hoffman and Hoffman, Greensboro, North Carolina. We would like to

thank Randy Collins, NCPSMA Manufacturer Representative and his staff for providing the meeting space for us as well as refreshments and a tasty lunch.

The NCPSMA Convention Planning Committee started first thing in the morning with State President Mark Letchworth presided over the meeting and State Vice President Chris Campbell opening with prayer and recognized new members.

NCPSMA State Secretary Jodene Abney had a previous engagement so State Vice President Chris Campbell presented the minutes from the previous Convention Planning Meeting.

President Letchworth then proceeded to offer the selections available for the 2024 Eastern Convention and the tentative agenda slowly began to come together. The theme selected for this year was "Make Maintenance Great Again". The entertainment for the convention this year will be one that we have enjoyed previously. Marianne Frederick better known as "The Hat Lady" will be back to entertain us during the Awards Banquet as well as instruct a couple of class. If you have never attended a workshop or presentation by "The Hat Lady" believe me it is something you do not want to miss.

There will be several new changes everyone will notice at this year's Eastern Convention. The convention will start first thing on Tuesday, September 24, 2024 with an Opening / Business Session and then will immediately follow with some credit hour classes. The cornhole tournament will be held during lunch with more classes in the afternoon. Wednesday, September 25, 2024 will be a day of classes along with the Jay Palmer Scholarship Golf Tournament. The day will finish off with the Awards

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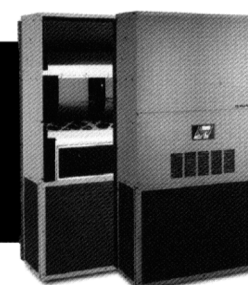
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NCPSSMA District Three Meeting Hosted by Halifax County Schools

continued from page 1



President Woodard introduced the guest speaker for the event, Kip Brandenburg, Area Manager with The Garland Company, Inc. The Garland Company is one of the worldwide leaders of quality, high-performance building envelope and roofing solutions. Mr. Brandenburg works with building owners, facility managers, engineers, architects and contractors to solve problems and develop building envelope solutions tailored to meet your performance, budgetary and scheduling needs. Some of the various offerings that he can provide with The Garland Company are: Roof maintenance and asset management programs; leak response; roof restorations and warranty extension programs; roof top diagnostics to identify weak points and route cause of water intrusion; strategic planning and execution of high performance building envelope solutions; parking structure assessments; maintenance and restoration; building envelope moisture intrusion from the roof, walls or windows; energy savings initiatives air barrier leakage assessments; and sustainable green solutions vegetated roofs. Mr. Brandenburg also encouraged all in attendance to participate in the upcoming fall District Three Golf Tournament. He participates each year and even though he didn't mention it at last year's tournament he won "Longest Drive."



State President Mark Letchworth thanked everyone for the support they had given him and reminded everyone if they need anything to feel free to contact him. He encouraged each person present to attend the 2024 Western Convention at Ridgecrest in Black Mountain on May 21-23 and to participate in the District Three Golf Tournament to be held on October 25, 2024.



Past President Bergie Speaks thanked all who attended and had everyone participate with a show of hands who had been a member the longest that was in attendance. He then gave some 50/50 tickets he had purchased to that individual. He encouraged each person to stay involved and attending meetings and conventions as it will only help each person on their job as friendship and knowledge from others is gained at each one.



President Woodard called the roll for the meeting then read the minutes of the last meeting, as well as gave the financial and golf tournament reports. A huge thank you to all of the vendors, players, and volunteers



Bergie Speaks



Greg Woodard



Donna Ritterpusch and Kelly Pink

and who supported the event and those who gave of their time. The district members voted to donate \$300 toward a refreshment break for the 16th Annual Western Convention, \$2,000 to the Jay Palmer Scholarship Fund and \$750 to NCPSSMA to help with the purchase of the new software. New district officers were elected as follows: President, Greg Woodard (Wilson County Schools); Vice President, Judy Aycock (Wilson County Schools); Secretary/Treasurer, Sue Farmer (Wilson County Schools); News Coordinator, Donna Ritterpusch (Nash County Schools); 1-Year Advisory Council, Chris Pulley (Vance County Schools); and 2-Year Advisory Council, Daryl Woodard (Wilson County Schools). Thank you to all the officers and their willingness to serve.



Mark Letchworth



Linda Cooper



Door Prizes



Guest Speaker Kip Brandenburg with The Garland Company



Andrew LaRowe

NCPSSMA Past President/Wilkes County Schools Maintenance Director Bergie Speaks gave the invocation. We were then treated to a wonderful dinner catered by Sylvia's Family Restaurant who provided big plates of ham, chicken, mashed potatoes and gravy, green beans, corn and hushpuppies. Following the meal Greg Woodard asked the vendors to introduce themselves. He noted the vendors represented a wealth of knowledge and information and encouraged members to reach out to them. A generous amount of door prizes, provided by the vendors, were awarded. We would like to thank all our vendors for their continued support!

A \$50 cash prize was awarded

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NCP SMA District Four Meeting Hosted by Cumberland County Schools

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Vincent Key

Harvey of Cumberland County Schools. The vendors introduced themselves and door prizes were awarded. A huge thank you to the vendors for their continued and generous support and thank you to Cumberland County Schools for hosting the event.

Kristie Payne



Yummy Desserts



Winifred Haire



Jennifer Locklear



Dr. Marvin Connelly, Jr.



Kevin Coleman



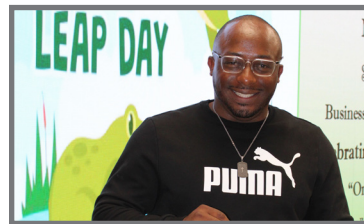
Mark Letchworth



Vendors



Door Prizes



50/50 Winner



New Officers: Secretary/Treasurer Donnie Tart, President Steve Matthews and Advisory Council Member Jason Bullard. Not Pictured: Vice President Phillip Perry, News Coordinator Jodene Abney and Advisory Council Member John Gordon.



THE MAINTENANCE BEACON

Executive Director: Kristie Payne
Phone: 828.565.0115
E-Mail: office@ncpsma.org
Website: www.ncpsma.org

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NCP SMA does not guarantee, warranty or defend the use of any products or services of those who sponsor, advertise or contribute articles in The Maintenance Beacon.

Officers of the Association

President	Mark Letchworth	252.236.8907 or NCP SMAPresident@gmail.com
Vice President	Chris Campbell	828.635.8248 x 303 or chriscampbell@alexander.k12.nc.us
Secretary	Jodene Abney	910.678. 2488 or jodeneabney@ccs.k12.nc.us
Liaison Officer	Jamie Johnson	252.426.2511 or jamiejohnson@pqschools.org
Immediate Past President	David Martin	704.658.2630 or dmartin@mgsd.k12.nc.us

Pump Optimization with Large Impellers

Part Two: Changing Pump Speed with a Variable Frequency Drive

A retired engineer I know once said, "There is no glory in an undersized pump." He was right, of course. There's less obvious fallout for specifying a pump with too much "oomph" than one with not enough. The point is pumps are often oversized and even occasionally undersized, and both scenarios have consequences. The question is, what do we do about it?

In our last blog, we discussed the pump affinity laws, which define the mathematical relationship between flow, RPM, and impeller diameter. If we have too much or too little flow, we can correct this by altering the impeller diameter or speed. But how do we determine which is the best method?

Let's explore this question with an example of a system designed for 500 gpm at 65 feet of head. If we select a constant speed pump for these conditions, ESP Systemwise gives us an e-1510 3BD pump with an 8.875" impeller operating at 1770 rpm with a 15hp non-overloading motor (Figure 1). The efficiency at this condition is 82.8%. The operating point is slightly above the specified requirement at 505 gpm and 66.3 ft. because impellers are trimmed in 1/8" increments.

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Supplemental Grant Applications

Supplemental Grant Applications [per SL 2023-134, Section 4.3.(c)] Being Accepted

The special FY23-24 application period for FY22-23 NBPSCF Grant recipients, with projects that are not yet under construction, is NOW OPEN. The deadline for submitting applications and supporting materials under this provision is June 30, 2024.

Session Law 2023-134, SECTION 4.3.(c)

The Department of Public Instruction may award additional grant funds for new construction, up to the maximum amounts provided in subsection (a) of this section, to a county that received an award for new construction under G.S. 115C-546.11(c) during the 2022-2023 fiscal year, provided that the county has not yet begun construction on the project. A county seeking additional funding pursuant to this subsection shall request additional House Bill 259 Session Law 2023-134 Page 21 funds from the Department in an amount not exceeding twelve million dollars (\$12,000,000) by June 30, 2024, and shall provide actual bids or other documentation of cost increases satisfactory to the Department based upon the original project scope outlined in the grant agreement to support the requested additional funding. The additional grant awards provided pursuant to this subsection shall be subject to the same local matching requirement applicable when the previous grant was awarded. The Department may amend any existing agreements entered into with grant recipients from the initial grant award to accommodate the increased grant funding provided in this subsection.

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NCP SMA District Three Meeting Hosted by Halifax County Schools

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to a member, director/supervisor, and vendor in attendance. Lenner Garner of Halifax County Schools won the regular member drawing; Daryl Woodard of Wilson County Schools won the director/supervisor drawing and Andy LaRowe of EduCon won the vendor drawing. The 50/50 drawing totaled \$233.50 and was won by State Vice President Chris Campbell of Alexander County Schools.



Kelly Pink

Thank you to Halifax County Schools for hosting this event and to the District Three Officers for providing District Three with a great event.

Kristie Payne



Guy Williams



Kip Brandenburg



50/50 Winner Chris Campbell and Greg Woodard



Director Winner Daryl Woodard and Greg Woodard



Greg Woodard and Member Winner Lenner Garner



Vendor Winner Andrew LaRowe and Greg Woodard



New Officers: President Greg Woodard, Advisory Council Daryl Woodard, Secretary Sue Farmer and News Coordinator Donna Ritterpusch. Not pictured: Advisory Council Chris Pulley and Vice President Judy Aycock

MEMBERSHIP APPLICATION

Membership runs from July 1, 2023 through June 30, 2024.

Membership Dues are \$20.00 if paying by check. Complete this form and submit along with your check for \$20.00 to: **NCP SMA, 224 Mulberry Street, Clyde, NC 28721**

NAME				
LEA (Local Educational Agency) OR COMPANY				
ADDRESS				
CITY		STATE		ZIP
TELEPHONE				
E-MAIL				
Would you like a reminder sent to your e-mail each month when the latest edition of the Maintenance Beacon is available online?			YES	NO

MEMBERSHIP TYPE	
REGULAR MEMBERSHIP	Available to all maintenance employees of various city, county, and state public schools as well as institutions of the community colleges.
REGULAR RETIRED MEMBER	Available to all RETIRED maintenance employees of various city, county, and state public schools as well as institutions of the community colleges.
ASSOCIATE MEMBER	Available to all people interested in the betterment of public-school maintenance including school board members, superintendents, principals, teachers, and vendors. ** Associate Members DO NOT have voting privileges.

MEMBERSHIP	Continuation of Current Membership
	First Time Member

Are you the Maintenance Director / Supervisor of your LEA? YES NO

Online payments of \$21.00 per membership are accepted at www.ncpsma.org

Online payments of \$21.00 per membership are accepted at www.ncpsma.org

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16th Annual NCPSMA Western Convention Individual Registration Form

Ridgecrest Conference Center • Black Mountain, NC
May 21-23, 2024 (Exhibitors May 22, 2024)

INDIVIDUAL REGISTRATION FORM FOR REGULAR OR RETIRED REGULAR MEMBERS

TYPE OR NEATLY PRINT AS ALL INFORMATION PROVIDED WILL BE PRINTED AS SUBMITTED

Name: _____

LEA / School System: _____ Regular Member Retired Member

Mailing Address: _____

Telephone Number: _____ Mobile Work Other

Email: _____

Information Needed For Ridgecrest: Staying Overnight at Ridgecrest Daily Commuter

CATEGORY	DESCRIPTION	QUANTITY	CHECK AMOUNT	DEBIT/CREDIT AMOUNT	TOTAL
Registration Fee	Before May 1		\$75	\$78	
	After May 1		\$85	\$88	
Membership Membership Runs July 1 through June 30 annually	Membership Fee		\$20	\$21	
Meal Ticket NOTE: Buffet Luncheon included with Registration Fee on Wednesday and Thursday	Includes Tuesday Dinner, Wednesday Breakfast and Dinner and Thursday Breakfast		\$60	\$63	
MUST BE PURCHASED BY MAY 1, 2024 There will be no refunds after May 1, 2024			GRAND TOTAL		

CONTACT INFORMATION IN CASE OF QUESTIONS (if different from above)

Contact Name: _____

Contact Phone Number: _____ Contact Email: _____

PAYMENT INFORMATION

- To pay by check: Make checks payable to NCPSMA and mail along with your completed Registration Form to:
 - NCPSMA, 224 Mulberry Street, Clyde, NC 28721
- To pay by credit/debit card: Visit our website at www.ncpsma.org

Direct all questions to Kristie Payne at office@ncpsma.org or call (828) 565-0115.

16th Annual NCPSMA Western Convention Multiple Registration Form

Ridgecrest Conference Center • Black Mountain, NC
May 21-23, 2024 (Exhibitors May 22, 2024)

MULTIPLEREGISTRATION FORM FOR REGULAR OR RETIRED REGULAR MEMBERS

TYPE OR NEATLY PRINT AS ALL INFORMATION PROVIDED WILL BE PRINTED AS SUBMITTED

Contact Name: _____

LEA / School System: _____ Regular Member Retired Member

Mailing Address: _____

Contact Telephone Number: _____ Mobile Work Other

Contact Email: _____

Information Needed For Ridgecrest: Staying Overnight at Ridgecrest Daily Commuter

Descriptions:

Registration Fee – Paying before May 1 or after May 1
Membership – All attendees must be a current member – Membership runs July 1 through June 30 annually
Meal Ticket – Includes meals at the Ridgecrest Cafeteria for Tuesday Dinner, Wednesday Breakfast and Dinner and Thursday Breakfast. NOTE: A Buffet Luncheon is provided on Wednesday and Thursday and is included with your Registration Fee


***** MUST BE PURCHASED BY MAY 1, 2024*****

ATTENDEE NAME	EMAIL **REQUIRED**	QTY	REGISTRATION BEFORE MAY 1	QTY	REGISTRATION AFTER MAY 1	QTY	MEMBERSHIP	QTY	MEAL TICKET	TOTAL
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
			\$75		\$85		\$20		\$60	
There will be no refunds after May 1, 2024			GRAND TOTAL							

PAYMENT INFORMATION


- To pay by check: Make checks payable to NCPSMA and mail along with your completed Registration Form to:
 - NCPSMA, 224 Mulberry Street, Clyde, NC 28721
- To pay by credit/debit card: Visit our website at www.ncpsma.org
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Direct all questions to Kristie Payne at office@ncpsma.org or call (828) 565-0115.



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16th Annual Western Convention Agenda

Johnson Springs Convention Center | Black Mountain, NC
May 21-23, 2024

Tuesday, May 21, 2024

9:00 am – 12:00 pm	Registration
10:00 am – 11:00 am	Advisory Council Meeting
11:00 am – 7:00 pm	The Mobile Innovation Showroom (sponsored by Door Security Solutions & DSS of the Carolinas) - Session 1
12:00 pm – 1:00 pm	Lunch on Your Own
1:00 pm – 2:00 pm	Variable Refrigerant Flow (VRF): A Benefit For Your School
1:00 pm – 3:00 pm	Dual Water (2 CEUs) How Do We Know Our Sports Lighting Systems are Safe? NC Locksmith Renewal (2 CEUs) Painting – Basics of Paint – What you need to know, what can go wrong and why Pesticide Licensing Recertification (2 CEUs)
1:00 pm – 5:00 pm	Registration
2:00 pm – 3:00 pm	TBA-1
3:00 pm – 4:00 pm	30 Tips for Hydronic Systems
3:00 pm – 5:00 pm	Dual Water (2 CEUs) Installation and Maintenance of Metal Roof Assemblies NC Locksmith Renewal (2 CEUs) Pesticide Licensing Recertification (2 CEUs) School Fire Inspections: What You Need to Know!
4:00 pm – 5:00 pm	Boiler Installation Pitfalls
5:30 pm – 6:30 pm	Dinner in Cafeteria – Previously Purchased Meal Ticket Required

Wednesday, May 22, 2024

7:15 am – 8:15 am	Breakfast in the Cafeteria – Previously Purchased Meal Ticket Required
7:30 am – 12:00 pm	Registration
8:00 am – 9:00 am	Coffee Break and Refreshments
8:00 am – 10:00 am	Dual Water (2 CEUs) Electrical (2 CEUs) NC Locksmith Renewal (2 CEUs) Small Engine and Power Equipment
8:00 am – 7:00 pm	The Mobile Innovation Showroom (sponsored by Door Security Solutions & DSS of the Carolinas) - Session 2
8:30 am – 9:00 am	Exhibitor Display Selection
9:00 am – 10:00 am	Exhibitor Display Setup
10:00 am – 11:00 am	Opening Session and Vendor Recognition
11:00 am – 12:00 pm	Attendee Visitation with Exhibitors – Session 1
11:00 am – 7:00 pm	Locksmith Mobile Classroom
12:00 pm – 1:00 pm	Traditional Southern Buffet Luncheon for Attendees and Exhibitors
1:00 pm – 2:30 pm	Attendee Visitation with Exhibitors – Session 2
1:00 pm – 4:00 pm	Registration
2:30 pm – 3:30 pm	Spectator Seating Code Compliance & Preventative Maintenance
2:30 pm – 4:30 pm	Blueprint Reading Electrical (2 CEUs) Exhibitor Display Breakdown Kitchen Equipment NC Locksmith Renewal (2 CEUs) Plumbing – Flush Valve/Faucet Repairs, Wall Hydrant Repairs and Backflow Prevention Repair Parts
3:30 pm – 4:30 pm	Care, Maintenance and Fire Code Compliance for Your Stage Curtains
4:45 pm – 6:45 pm	Cornhole Tournament
5:30 pm – 6:30 pm	Dinner in Cafeteria – Previously Purchased Meal Ticket Required

Thursday, May 23, 2024

7:15 am – 8:15 am	Breakfast in the Cafeteria – Previously Purchased Meal Ticket Required
7:30 am – 10:30 am	Coffee Break
7:30 am – 12:00 pm	Registration
8:00 am – 10:00 am	Director / Supervisor Round Table Discussion Electrical (2 CEUs) Fire Alarms Pneumatic to DDC Ticks, Birds & Bats and Equipment Calibration (2 CEUs) – Session 1 You've Got a New Playground Now What?
10:00 am – 11:00 am	Ticks, Birds & Bats and Equipment Calibration (2 CEUs) – Session 2
10:00 am – 12:00 pm	Asbestos and Lead-Based Paint Reimbursement Program BEST Interchangeable Core Combining Short Course (2 CEUs) Electrical (2 CEUs) Generac Generators New Refrigerant
11:00 am – 12:00 pm	TBA-2
12:15 pm – 1:30 pm	Tex-Mex Fiesta Buffet Luncheon for Attendees
1:30 pm – 2:30 pm	Closing Session Asbestos and Lead-Based Paint Reimbursement Program Best Interchangeable Core Combining Short Course – 2 CEUs Generac Generators Pesticide Structural – 2 CEUs Electrical – 2 CEUs
12:15 pm – 1:30 pm	Tex-Mex Fiesta Buffet Luncheon for Attendees
1:30 pm – 2:30 pm	Closing Session

Pump Optimization with Large Impellers

Part One: Why Bigger Really is Better

continued from page 5

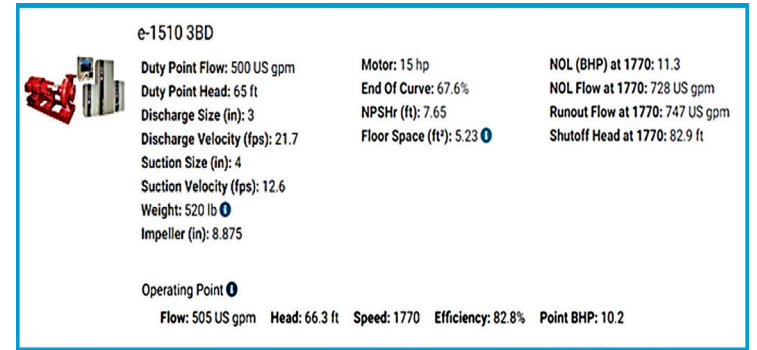


FIGURE 1. ESP SYSTEMWISE CONSTANT SPEED PUMP SELECTION FOR A SYSTEM DESIGNED FOR 500 GPM AT 65 FEET OF HEAD.

Oops! We Underestimated the Head Loss

What happens if the head loss turns out to be only 55 feet? The easiest solution is to consume the extra head by throttling the pump. However, that comes at an operating cost penalty to the owner. We can estimate the throttling losses by using the following equation for hydraulic horsepower:

$$bhp = (qh) / (3960\eta) \text{ where:}$$

q = volumetric flow rate (gpm)
h = head (feet)
η = pump efficiency

Using this equation, we calculate that the throttling losses required to achieve 500 gpm at 55 feet of head with this unaltered pump will cost us an extra 1.52 horsepower. Assuming this pump operates continuously, the annual operating cost penalty, based on the 2023 US average cost of 12.79 cents per kWh and a motor efficiency of 92%, amounts to about \$1,380. This throttling loss is certainly undesirable and, in many circumstances, not allowed under ASHRAE 90.1-2022, which states:

ASHRAE 90.1 6.7.3.3.3 **Hydronic System Balancing.** Hydronic systems shall be proportionately balanced in a manner to first minimize throttling losses; then the pump impeller shall be trimmed, or pump speed shall be adjusted to meet design flow conditions.

Exceptions to 6.7.3.3.3: Impellers need not be trimmed, nor pump speed adjusted

- for pumps with pump motors of 10 hp or less or
- when throttling results in no greater than 5% of the nameplate horsepower draw, or 3 hp, whichever is greater, above that required if the impeller was trimmed.

If we wish to eliminate this cost, which will accrue over the operating life of the pump, we can trim the impeller or operate the pump at a reduced speed.

For the impeller trimming option, ESP Systemwise indicates a required impeller diameter of 8.375", which reduces our efficiency to 81.3% (Figure 2). The pump efficiency is reduced by 1.5% due to the increased impeller trim. Note that this duty point would allow for a ten-horsepower non-overloading motor.



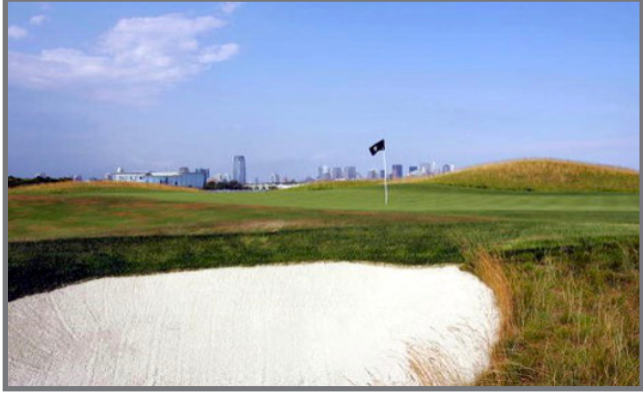
FIGURE 2. ESP SYSTEMWISE CONSTANT SPEED PUMP SELECTION WITH IMPELLER TRIMMED TO ADJUST FOR 55 FEET OF HEAD

If we were to install a variable frequency drive and reduce the pump speed to meet the 55-foot head requirement, we would operate the pump at 1650 rpm, resulting in an efficiency of 82.3% versus the 81.3 efficiency that would result from trimming the impeller (Figure 3).

continued on page 11

Save The Date

NCPSMA District Three Annual Golf Tournament
WEDGEWOOD PUBLIC GOLF COURSE In Wilson, NC



Friday, October 25, 2024

Shotgun Start
1 PM

Rain Date
 Saturday, November 2, 2024

NCPSMA District Three Annual Golf Tournament Superball Tournament

Friday, October 25, 2024 • RAIN DATE Saturday, November 2, 2024
 Wedgewood Golf Course 3201 Old Stantonsburg Road, Wilson, NC

DUE TO WEDGEWOOD TOURNAMENT CHANGES

Entry Fee: \$250.00 Per Team

(THE FEE INCLUDES: GREEN FEE, CART, DRIVING RANGE BALLS, LUNCH)

ALL CHECKS: PAYABLE TO: NCPSMA DISTRICT III

REGISTRATION FORM and PAYMENT FOR HOLE SPONSORSHIP AND TEAMS ARE

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!!!!!!IF PAYMENT IS NOT RECEIVED BY THIS DATE YOU CANNOT PARTICIPATE!!!!!!

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- Closest To Pin – 5th and 12th Hole
- Hole Sponsorship: \$100.00 per hole
- Mulligan's: \$5.00 Each (MAX) (2)
- Longest Drive – 14th Hole

COMPLETE:

Team Name: _____
 Team Players Names: Address: _____
 School Unit or Company: _____
 LUNCH AT NOON Shotgun start at 1:00 PM

RETURN TO: NCPSMA GOLF TOURNAMENT Attention: Sue Farmer
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Supplemental Grant Applications

continued from page 5

The Department may award additional grant funds under this subsection outside of the regular application process and timeline; provided, however, all additional grant funds shall be awarded no later than June 30, 2025.

SUPPLEMENTAL GRANT APPLICATION TIMELINE

- i Guidance Issued October 13, 2023
- i Application Opens January 8, 2024
- i Application Deadline June 30, 2024

ELIGIBILITY

Counties that received a previous NBPSCF grant award for new construction under G.S. 115C-546.11(c) during the 2022-2023 fiscal year, provided that the county has not yet begun construction on the grant-funded project.

MATCHING FUNDS

Counties receiving a Supplemental NBPSCF Grant are required to provide local matching funds from county funds, other non-state funds, or a combination of these sources, in accordance with G.S. 115C-546.11.(a). Local matching fund requirements range from 0% to 35% of the grant amount. The additional grant awards provided pursuant to this subsection shall be subject to the same local matching requirement applicable when the previous grant was awarded.

MAXIMUM AWARD

The maximum Supplemental NBPSCF Grant award amount is \$12 million, subject to funding availability.

EVALUATION

Applications for Supplemental NBPSCF Grant funding will be evaluated based on actual bids or other supporting documentation of cost increases satisfactory to the Department of Public Instruction, based upon the original project scope as outlined in the grant agreement and original grant application.

AGREEMENT A county receiving a Supplemental NBPSCF Grant award is required to enter into an amended agreement with the Department of Public Instruction detailing the use of grant funds, in accordance with G.S. 115C-546.12.(a). DPI will provide supplemental grant recipients with the necessary Agreement Forms following announcement of awards. Signed Agreements are due within 60 days of award announcement.

REPORTING

Grant recipients are required to submit a report by April 1 of each year, with each grant funds distribution request, and upon completion of the project, detailing: the use of grant funds, progress on the project, and impact of the project on the county's school capital plan. Grant funds will be disbursed in a series of payments based on the progress of the project. To receive a distribution, the grant recipient must submit a request for distribution, along with documentation of the expenditures for which the distribution is requested, and evidence that the matching requirement has been met. DPI will provide grant recipients with Reporting and Distribution Request forms following announcement of awards.

Find the application at this link: <https://www.dpi.nc.gov/districts-schools/district-operations/school-planning/capital-funding>

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When:
Tuesday, May 21st, 2024 11:00 AM - 7:00 PM
Wednesday, May 22, 2024 8:00 AM - 7:00 PM

Where:
NCPMSA 16th Annual Western Convention
Ridgecrest Conference Center
1 Ridgecrest Drive Black Mountain NC 28711

Contact:
Tammy Griffin
tammy.griffin@assaabloy.com
980.353.6035

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Pump Optimization with Large Impellers

Part One: Why Bigger Really is Better

continued from page 8

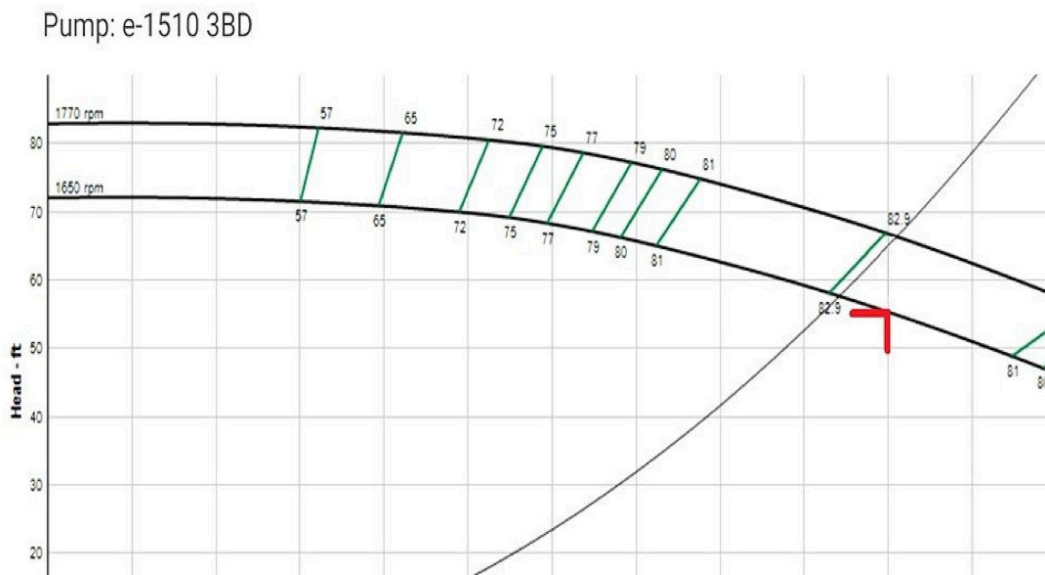



FIGURE 3. ADDING A VARIABLE SPEED DRIVE RESULTS IN AN EFFICIENCY (82.3%) VERSUS TRIMMING THE IMPELLER (81.3%)

Oops! We Underestimated the Head Loss

Let's consider the less likely scenario of the required head exceeding the specified head by 10 feet, resulting in a duty point of 500 GPM at 75 feet.

We could replace the constant speed pump with a larger diameter (9.25") impeller, increasing efficiency to 83.6% (Figure 4). However, replacing the impeller is costly and may be disruptive.

e-1510 3BD

	Duty Point Flow: 500 US gpm	Motor: 15 hp	NOL (BHP) at 1770: 13.1
	Duty Point Head: 75 ft	End Of Curve: 63.3%	NOL Flow at 1770: 792 US gpm
	Discharge Size (in): 3	NPSHr (ft): 7.66	Runout Flow at 1770: 792 US gpm
	Discharge Velocity (fps): 21.7	Floor Space (ft²): 5.23	Shutoff Head at 1770: 90.8 ft
	Suction Size (in): 4		
	Suction Velocity (fps): 12.6		
	Weight: 520 lb		
	Impeller (in): 9.25		

Operating Point

Flow: 501 US gpm Head: 75.3 ft Speed: 1770 Efficiency: 83.6% Point BHP: 11.3

FIGURE 4: IF A PUMP IS UNDERSIZED FOR AN SYSTEM, WE COULD REPLACE THE IMPELLER WITH A LARGER ONE, WHICH WOULD INCREASE EFFICIENCY, BUT MAY BE COSTLY AND DISRUPTIVE.

We could instead apply a variable speed drive and operate the 8.875" impeller at approximately 1835 rpm, resulting in an efficiency of 82.6%.

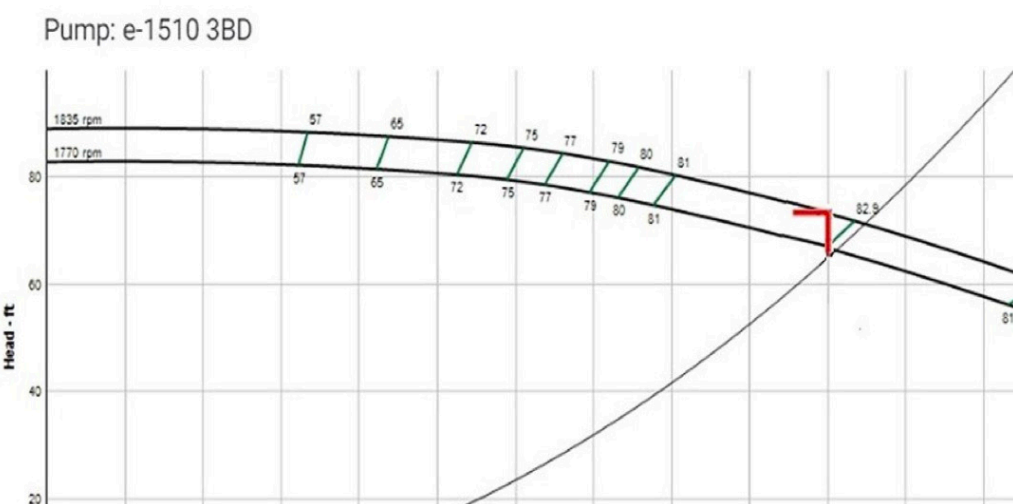


FIGURE 5. ALTERNATIVELY, WE CAN LEAVE THE IMPELLER AS IS AND ADD A VFD WHICH WILL STILL RESULT IN A SMALL EFFICIENCY GAIN.

The examples presented here illustrate the benefits of changing pump speed with a variable frequency drive, as long as the increase in speed doesn't overload the motor. These benefits are even more significant when we select a pump with an optimized (larger) impeller.

The next blog will revisit the scenarios above with an optimized pump selection.

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Convention Planning and Advisory Council Meeting

continued from page 3

Banquet. Thursday, September 26, 2024 will start with classes and Exhibitor set up and then attendees will get to spend the day visiting with exhibitors and learn about the products and services they offer. Friday, September 27, 2024 will offer more classes and finish the conference with a closing session which will have everyone ready to head home around lunch time.

After a brief lunch break the meetings continued as President Letchworth called the Advisory Council meeting to order. District 3 President Greg Woodard opened with prayer and State Vice President Chris Campbell welcomed new members to the Advisory Council meeting.


NCPSMA State Vice President Chris Campbell presented the minutes from the last two Advisory Council Meetings (one was a special called meeting).

Executive Director Kristie Payne presented the Membership, Maintenance Beacon and Financial reports. She then proceeded to give an update on the 2024 Western Convention.

President Letchworth asked for volunteers to help at the 2024 Western Convention. He then presented the 2024 Eastern Convention tentative agenda from the mornings Convention Planning Committee Meeting for approval. A new "By-Law Committee" was formed to bring the current By-Laws up to date.

President Letchworth thanked everyone for attending, wished everyone a safe trip home and adjourned the meeting.

Kristie Payne





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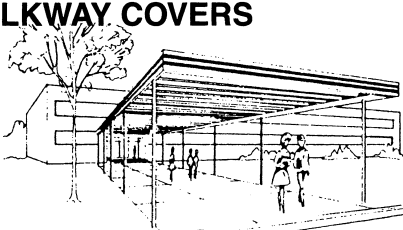
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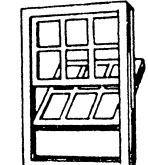
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